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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 74 of the Commission's	)	MM Docket No. 93-24
Rules With Regard to the Instructional	)	
Television Fixed Service	)	

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COMMENTS IN RESPONSE TO ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING

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EXECUTIVE SUMMARY

WCAI applauds the Commission for proposing a wide variety of measures designed to stop the abuses that have infected ITFS application processing and to expedite the processing of ITFS applications. Admittedly, WCAI does not agree with all of the measures proposed in the *FNPRM*, and believes that there are additional steps, not mentioned in the *FNPRM*, that the Commission should take to deter abuse. Nonetheless, WCAI believes the Commission is on the right track towards creating a regulatory regime for the ITFS that will permit use of a filing window system and put an end to the abuses of the past.

WCAI supports the Commission's proposal to implement filing windows, but that support is subject to the caveat that the Commission must be prepared to open frequent filing windows so as not to slow the development of wireless cable systems and ITFS services.

Adoption of WCAI's long-pending proposal to modify the protected service area ("PSA") definition would do more than anything else to deter speculative applications. The current PSA definition fails to adequately protect wireless cable subscribers, creating an environment that encourages the greenmail applications that have flooded the Commission. The Commission should make certain that it does not restrict PSA applicability in a manner that promotes speculation and greenmail.

The Commission's current ITFS financial certification rules are not working to prevent speculation, primarily because the Commission refuses to look behind applicant certifications even in the face of evidence that the certifications are false. Requiring ITFS applicants that rely on a third party to finance construction to provide a certificate of financial ability from

that third party may deter speculation without imposing undue burdens on ITFS applicants or the processing staff. By providing the Commission with direct recourse against the third party, such an approach may lead to more vigorous enforcement than currently exists. In addition, the Commission should employ spot checks to promote the filing of accurate certificates.

While a cap on the number of applications an entity can fund in a given window may be appropriate, the Commission's proposal must be modified so as not to frustrate non-speculative filings. Caps should not apply to applications proposing major changes, nor should they apply when a wireless cable operator that already has access to four or more MDS channels in the market is completing its channel complement. These sorts of applications are not speculative, and limits on their filing will only slow the development of wireless cable and the initiation of new ITFS services.

The Commission should adopt WCAI's proposal for expediting consideration of certain applications. That proposal can be implemented in a manner that minimizes any imposition on the staff, while allocating scarce staff resources to those applications most likely to yield rapid service to the public.

The Commission should afford interested parties a fair opportunity to petition to deny an application for additional time to construct an ITFS station. The Commission's current policy of granting requests for additional time as a matter of course only promotes speculative filings.

Even where frequency offset is employed, the Commission should require a demonstration that the cochannel desired to undesired signal ratio will be at least 39 dB. While use of frequency offset techniques can reduce interference, tests suggest that picture quality becomes objectionable when the cochannel desired to undesired signal ratio falls below 39 dB.

The Commission should revise and clarify its policies regarding ITFS receive sites to assure protection to those sites where educational programming is being viewed in connection with courses offered for credit by accredited educational institutions while preventing abuse. Distance learning receive sites that are employed for viewing of formal educational programming should be treated no differently than receive sites that are devoted exclusively to accredited educational programs. Only those receive sites where formal educational programming is viewed by students enrolled in for-credit courses offered by accredited institutions should be entitled to interference protection. The Commission should restrict consideration of receive sites to those ITFS receive sites receiving a signal to noise ratio of at least 45 dB.

The Commission should modify its system for classifying ITFS modifications so that all applications that pose a significant risk of interference or preclusion of other facilities are treated as major change applications. On the other hand, the Commission should permit ITFS licensees to make insignificant changes without first securing prior Commission approval.

ITFS applicants should be required to submit FAA determinations to the Commission within thirty days of issuance in order to expedite application processing. The Commission's

proposal to adopt a propagation model should be implemented. The Commission should formalize its policy limiting the consideration an ITFS licensee can receive upon assignment of a license for an unconstructed station.

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COMMENTS IN RESPONSE TO ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING

The Wireless Cable Association International, Inc. ("WCAI"),[1/] by its attorneys and pursuant to Sections 1.415 and 1.419 of the Commission's Rules, hereby submits its comments in response to the *Order and Further Notice of Proposed Rulemaking* ("*FNPRM*") in this proceeding.[2/]

I. INTRODUCTION.

Before turning to the specific proposals advanced in the *FNPRM*, WCAI applauds the Commission for modifying the moratorium adopted in February 1993 on the filing of applications for new Instructional Television Fixed Service ("ITFS") stations and for major changes in existing ITFS facilities so that applications for major changes can now be filed and processed. During the sixteen months between the imposition of the freeze and the adoption of the *FNPRM*, the wireless cable industry has been the beneficiary of an unprecedented

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[1/]WCAI, the trade association of the wireless cable industry, submitted comments and reply comments in response to the *Notice of Proposed Rulemaking* commencing this proceeding. *See* Comments of WCAI, MM Docket No. 93-24 (filed April 19, 1993)[hereinafter cited as "WCAI Comments"]; Reply Comments of WCAI, MM Docket No. 93-24 (filed May 19, 1993)[hereinafter cited as "WCAI Reply Comments"].

[2/]*Amendment of Part 74 of the Commission's Rules With Regard to the Instructional Television Fixed Service,* FCC 94-148, MM Docket No. 93-24 (rel. July 6, 1994)[hereinafter cited as "*FNPRM*"].

influx of equity and debt financing.[3/] Yet, relatively few new systems were launched during this period, in part because major changes in ITFS facilities were necessary to accomplish the co-location of ITFS and Multipoint Distribution Service ("MDS") stations, and ITFS licensees were barred from applying for Commission consent to those major changes. The lifting of the freeze on major change applications and the timely processing of those applications that are being filed while the Commission considers the issues raised in the *FNPRM* should lead to the launching of many new wireless cable systems in late 1994 and early 1995. Many more will launch soon thereafter, if the Commission can achieve its goal of lifting the freeze on applications for new ITFS stations while deterring speculative and strike applications. Now that financing is more readily available, the only thing stopping the launch of new systems in many markets is a lack of licensed ITFS stations.

[3/]As Paul Kagan Associates, Inc. noted earlier this year:

> What a difference a year makes, or had better. Last spring, the nascent wireless cable industry was searching for capital to grow with after 23 years of making do with what little equity it had patched together.
>
> $240 mil. later, via a dozen new public offerings plus millions in private funding, the industry is on Wall Street as a growth play.

Wireless Cable Investor, No. 412, at 1 (April 25, 1994). Since that was written, additional funding has more than doubled the equity raised by the wireless cable industry this year. Recently, the *Wall Street Journal* took note of the more than $440 million worth of initial and secondary stock offerings by wireless cable operators in the past year and concluded that "Wall Street loves wireless." Lee, "Wireless Cable-Television Sector Is on Acquisition Binge," *Wall St. J.* (June 8, 1994). Indeed, just two months ago American Telecasting, Inc. announced that it had closed on an unprecedented $100 million high-yield debt offering. Gibbons, "Big Deal Inspires Ops At Wireless Show," *Multichannel News*, at 3 (June 27, 1994).

The Commission should also be applauded for finally acknowledging in the *FNPRM* that its ITFS application processes have not only become overburdened, but also have become infected with abuse. In its initial comments in response to the *Notice of Proposed Rulemaking ("NPRM")*, WCAI offered lukewarm support for the Commission's proposal to eliminate the A/B cut-off list approach that currently governs the filing and processing of applications for new facilities and major modifications in the ITFS and to substitute a window filing procedure similar to that used in the Low Power Television Service. WCAI did not oppose the use of a filing window for ITFS *per se*. Rather, it expressed concern that without other changes in the ITFS application processing system, adoption of the proposal advanced in the *NPRM* could have adverse consequences for America's educational community and the wireless cable industry alike. Simply put, WCAI fears that merely adopting a filing window system would further exacerbate the already-rampant abuse of ITFS excess capacity leasing for speculation and greenmail.[4/] As the comments previously submitted to the Commission in PR Docket No. 92-80 had illustrated with crystalline clarity, speculators and greenmailers have been wreaking havoc in the wireless cable industry for some time by abusing the ITFS application process.[5/]

[4/] *See* WCAI Comments, at 2-8.

[5/] *See, e.g.* Comments of Emerald Enterprises, Inc., at 12 (filed June 29, 1992)("The Commission is well aware of the modus operandi of firms such as Rural Vision, which enter lease agreements with hapless local schools only to hold critical channels for a king's ransom, utterly beyond the reach of wireless cable operators unless they accede to absurd lease demands"); Comments of Fletcher, Heald & Hildreth, at 9 (filed June 29, 1992)("Anyone who has substantial experience in the wireless cable industry knows of RuralVision, its abuses of

(continued...)

WCAI was hardly alone in its concern. The American Council on Education, American Association of Community Colleges, Arizona Board of Regents for Benefit of the University of Arizona, Association of Higher Education, California State University - Sacramento, Iowa Public Broadcasting Board, South Carolina Educational Television Commission, State of Wisconsin - Educational Communications Board, St. Louis Regional Educational and Public Television Commission, University of Maine System, University of Wisconsin System, and University System of the Ana G. Mendez Educational Foundation (collectively, the "Educational Parties"), The National ITFS Association ("NIA"), WJB-TV Limited Partnership ("WJB-TV") and others joined with WCAI in expressing fear over the potential for increased speculation should the ITFS filing window procedure be adopted without other rule changes.[6/] Indeed, the fact that only RuralVision South, Inc. and RuralVision Central, Inc. (collectively, "RuralVision") wholeheartedly supported the proposals

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[5/](...continued)
process in ITFS applications filed by its proxy school systems, and other ITFS speculators who make filings to extort money from serious wireless cable operators"); Comments of WJB-TV Ft. Pierce Limited Partnership, at 10 (filed June 29, 1992)("WJB is mindful of the large number of Petitions to Deny that have been filed against [one] particular entity, many of which allege improper, dishonest, and even illegal conduct."); Comments of Wireless Cable Ass'n Int'l, PR Docket No. 92-80, at 35-43 (filed June 29, 1992)[hereinafter cited as "WCAI PR Docket No. 92-80 Comments"].

[6/]*See* Comments of Nat'l ITFS Ass'n, MM Docket No. 93-24, at 3 (filed April 19, 1993); Comments of Amer. Council on Ed., *et al*, MM Docket No. 93-24, at 15 (filed April 19, 1993)[hereinafter cited as "Educational Parties Comments"]; Comments of WJB-TV Limited Partnership, MM Docket No. 93-24, at 7 (filed April 19, 1993)("the real problem lies not in the rules themselves, but in the ability of a few commercial entities to abuse the filing process.")[hereinafter cited as "WJB-TV Comments"]; Comments of Paul Jackson Enterprises, MM Docket No. 93-24, at 2 (filed April 19, 1993)("the window procedure proposed in the NPRM could, ironically, lead to the filing of applications by less than scrupulous filers").

advanced in the *NPRM* spoke volumes on the need to implement further rules to deter speculation.

With the *FNPRM*, the Commission has proposed a variety of measures designed to limit abuses of the ITFS application process and enhance its processing efficiency. As discussed in detail below, WCAI does not agree with all of the measures proposed in the *FNPRM*, and believes that there are additional steps, not mentioned in the *FNPRM*, that the Commission should take to deter abuse. Nonetheless, WCAI believes the Commission is on the right track towards creating a regulatory regime for the ITFS that will permit use of a filing window system and put an end to the abuses of the past. What follows are WCAI's specific comments on the proposals advanced in the *FNPRM* and WCAI's additional suggestions for preventing abuse when a filing window system is implemented.

II. DISCUSSION.

A. The Commission Must Be Prepared To Open Frequent Filing Windows So As Not To Slow The Development of Wireless Cable Systems.

WCAI's support for the adoption of a filing window system for ITFS applications is subject to the caveat that windows not be so few and far between that wireless cable operators are unable to secure the necessary critical mass of ITFS and MDS channels licensed at a single site using a common technical configuration. As the Commission has just recently confirmed, "wireless cable operators endeavoring to compete with wired cable systems, whose number of channels often exceeds 50, must have access to as many of the available 32 or 33

ITFS and MMDS channels as possible in a given market."[7/] Moreover, those channels must be co-located and employ a common system design so that at every receive site the signal level and polarization of every channel is the same.[8/]

It is virtually unheard of for a wireless cable system to launch without the Commission first being asked to authorize new ITFS stations and/or to approve major changes in existing ITFS stations. Because in most markets most ITFS channels are vacant until a wireless cable operator agrees to fund construction and operation of facilities,[9/] and because those ITFS stations that do exist are rarely at the optimum location for a wireless cable system, it is unusual indeed that a wireless cable system can be developed without securing a new or modified license with respect to every ITFS channel in the market. A filing window system will most certainly undercut the Commission's efforts to promote wireless cable as an effective source of competition to traditional cable systems unless applications for new ITFS stations and for major changes in existing facilities can be filed frequently and processed rapidly thereafter.

[7/] *Amendment of Part 74 of the Commission's Rules Governing Use of the Frequencies in the Instructional Television Fixed Service*, FCC 94-147, MM Docket No. 93-106, at ¶ 14 (rel. July 6, 1994).

[8/] *See Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, and Cable Television Relay Service,* 5 FCC Rcd 6472, 6474 (1990).

[9/] As the Commission recognizes in the *FNPRM*, more than 90% of the recently filed ITFS applications proposed facilities that were to be funded by a wireless cable operator. *See FNPRM*, at ¶ 2, n. 5.

As WCAI noted in its initial comments, it is seriously concerned that the Commission will open ITFS filing windows so infrequently that the licensing of critical new and modified ITFS facilities will be delayed.[10/] WCAI was not alone in this concern -- the Educational Parties also urged the Commission to establish a firm schedule of filing windows.[11/] Therefore, WCAI is pleased that although the *FNPRM* does not directly address the frequency of ITFS filing windows, the Commission does acknowledge that "an ongoing series of filing windows will ensure an opportunity for . . . educators to file when they are ready."[12/]

In its reply comments in response to the *NPRM*, WCAI suggested that, in light of the resurgent demand for new and modified ITFS facilities spurred by the emergence of wireless cable, the scheduling of at least one window a quarter is necessary to avoid unduly delaying the licensing of ITFS facilities essential to the growth of the wireless cable industry.[13/] Particularly since WCAI is in Section II.K of these comments advocating the adoption of rules that would result in many more ITFS applications being classified as "major change" applications, WCAI believes more strongly than ever that it is essential for the Commission to establish a regular schedule of ITFS filing windows of no less than one each calendar quarter. While the public interest will best be served by subjecting any modification application that could cause harmful electrical interference to petitions to deny and competing

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[10/] *See* WCAI Comments, at 9-10.

[11/] *See* Educational Parties Comments, at 11-12.

[12/] *FNPRM*, at ¶ 11.

[13/] *See* WCAI Reply Comments, at 4-5.

applications, the benefits of a more expansive definition of "major change" will be outweighed by regulatory delay unless major change applications can be filed with sufficient frequency that wireless cable co-location projects are not unduly delayed.[14/]

Regularly scheduling filing windows to occur during each calendar quarter will not only assist wireless cable operators and their ITFS affiliates, it will benefit ITFS licensees that are not leasing excess capacity. With regularly scheduled windows, the Commission can assure that ITFS applicants will have more than the 60 days they are now guaranteed under the A/B cut-off system for preparing applications.[15/] In addition, regularly scheduling filing windows each quarter would resolve the concern expressed by NIA that educators would have difficulty responding to a window announced during summer vacation.[16/] Since windows would be well-known in advance, educators could make appropriate advance arrangements to participate. Finally, regularly scheduled windows each quarter would obviate the need for the Commission to adopt its proposal to establish a special window every December for the filing of applications that depend upon National Telecommunications and Information Administration funding.[17/]

[14/]WCAI also supports the Commission's proposal to retain the present practice of exempting from the rules applicable to major changes those major changes that would resolve mutually-exclusive applications. *See FNPRM*, at ¶ 5. This practice has been instrumental in launching several wireless cable systems, and should continue.

[15/]*See FNPRM*, at ¶ 4.

[16/]*See id.*, at ¶ 9.

[17/]*See id.*, at ¶ 12.

B. Adoption of WCAI's Long-Pending Proposal To Modify The Protected Service Area Definition Would Do More Than Anything Else To Deter Speculative Applications.

As the Commission is well-aware, a few entities have been abusing the ITFS interference protection rules (which incorporate the protected service area ("PSA") concept) by sponsoring proposed stations that appear to have no other purpose than to frustrate the ability of wireless cable systems in adjacent communities to add ITFS stations to their systems. Clearly, the word is out that the ITFS interference protection rules permit economic blackmail. The greenmail phenomenon that caused the Distribution Services Branch to be flooded with strike ITFS applications is virtually certain to manifest itself again once the freeze is lifted unless the Commission modifies the PSA definition to afford ITFS and MDS stations more realistic protection against interference. If the Commission lifts the freeze and permits new ITFS applications to be submitted for areas unduly close to the service areas of other ITFS facilities, greenmailers will no doubt jump at the opportunity to sponsor the filing of ITFS applications in the hope of reaping a financial windfall.

Throughout General Docket No. 90-54 and PR Docket No. 92-80, a major thrust of WCAI's efforts has been to secure a revision of the PSA definition set forth in Section 21.902(d) of the Rules for protecting systems transmitting analog NTSC signals.[18/] As WCAI explained in full in its still pending Petition for Partial Reconsideration in General Docket No.

[18/] *See, e.g.* Comments of Wireless Cable Ass'n, Gen. Docket No. 90-54, at 45-52 (filed May 7, 1990)[hereinafter cited as "WCAI Gen. Docket No. 90-54 Comments"]; Petition of Wireless Cable Ass'n, Gen. Docket No. 90-54, at 2-7 (filed Dec. 3, 1990)[hereinafter cited as "WCAI Petition for Reconsideration"]; Petition of Wireless Cable Ass'n for Partial Reconsideration, Gen. Docket No. 90-54 (filed Dec. 13, 1991)[hereinafter cited as "WCAI Petition for Partial Reconsideration"]; WCAI PR Docket No. 92-80 Comments, at 35-43.

90-54, "the current PSA definition is a ticking time-bomb set to explode in the wireless industry's future."[19/] Once the freezes on applications for new MDS and ITFS stations are lifted, the only vehicle a wireless cable system operator has to protect its subscriber base against harmful interference is the PSA definition -- a definition that is woefully inadequate.[20/]

Proper resolution of the PSA definition issue is critical both to deterring strike applications, and to preserving for wireless cable operators the critical mass of potential subscribers essential to attract financing. If the Commission lifts the freeze but retains rules that will permit ITFS stations to be located too close together in the post-freeze era, wireless cable operators will have to choose between the Scylla of accepting destructive electrical interference at subscribers' residences and the Charybdis of buying out the greenmailers who sponsored the closely-spaced stations. Retention of the existing PSA definition in the post-freeze era will be a field day for the unscrupulous.

In defining the boundaries for the PSA, the Commission's policy goal has been to set limits coterminous with "that area in which reliable service is available to the majority of receiver locations within the area."[21/] Make no mistake -- WCAI fully agrees with that

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[19/]WCAI Petition for Partial Reconsideration, at 2.

[20/]In its *Report and Order* in PR Docket No. 92-80, the Commission deferred consideration of the PSA definition to the reconsideration phase of General Docket No. 90-54. *See Amendment of Parts 1, 2 and 21 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands,* 8 FCC Rcd 1444, 1447-48 n. 40 (1993).

[21/]*Amendment of Parts 21, 74 and 94 of the Commission's Rules and Regulations with Regard to Technical Requirements Applicable to the Multipoint Distribution Service, the Instructional Television Fixed Service and the Private Operational Fixed Microwave Service (OFS)*, 98 F.C.C.2d 68, 87 (1984)[hereinafter cited as "*80-113 FR&O*"].

approach to defining the PSA. Indeed, the focus of WCAI's campaign for a redefined PSA has been on the dramatic technological developments in reception equipment technology that have occurred since the current PSA definition was first proposed more than a decade ago. As compared with the situation in 1980, far less signal is necessary at the antenna input to produce an acceptable picture, effectively increasing the size of the area in which reliable service can be provided.[22/] And, wireless cable systems are generally operating at significantly greater power levels than was the case in the early 1980s, further increasing the size of the serviceable area.

To quantify the extent to which wireless cable operators are capable of serving subscribers beyond their PSA, WCAI presented the Commission in General Docket No. 90-54 with the results of an extensive survey of operating wireless cable systems.[23/] The results illustrate the extent to which the PSA definition has become obsolete. Fully 59 percent of the systems responding to WCAI's survey indicated that more than 50 percent of their current subscribers are located more than 15 miles from the transmission headend. The median is that 57.5 percent of wireless subscribers reside outside the PSA of the station serving them. Clearly, any relationship between the PSA definition and the area in which wireless cable

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[22/]As a result of improvements in the state of the art, wireless cable downconverters now introduce far less noise than they did in 1980. "The lower the system noise floor, the easier it is for the receive to hear weak signals." Bostick and Bostick, "Factors Affecting The Range Of The System," *Wireless Broadcasting*, at 21, 22 (Aug. 1994). Moreover, inexpensive signal preamplifiers have been developed for installation at receive sites.

[23/]WCAI Petition for Partial Reconsideration, at 5.

systems provide reliable service is long gone. And therein lies the problem -- subscribers residing outside the PSA can readily be held hostage by the unscrupulous.

The current PSA boundary was first proposed by the Commission in a *Notice of Inquiry and Proposed Rulemaking* adopted on March 19, 1980 in General Docket No. 80-113.[24/] As is explained in detail in that document, the 15-mile PSA radius for omnidirectional antennas was derived by the Commission first by ascertaining the faded signal to noise ("S/N") ratio at a television set's antenna terminals that is required to produce an adequate picture and then by calculating that a "typical" MDS station operating with 10 watts transmitter power output and an omnidirectional antenna with a 13 dB gain would yield a signal with that faded S/N ratio 15 miles away.

With the passage of time, it has become evident that the resulting rules, codified in Section 21.902(d), are inherently flawed. As WCAI has demonstrated, they are based on technology that is now obsolete -- as a result of dramatic improvements in reception equipment technology, the benchmark faded S/N ratio is now available well beyond 15 miles for even a station operating at 10 watts. And, since the Commission in Gen. Docket No. 90-54 increased the maximum transmitter output power at which stations can readily operate,[25/]

[24/] *See Amendment of Parts 21, 74 and 94 of the Commission's Rules and Regulations with Regard to Technical Requirements Applicable to the Multipoint Distribution Service, the Instructional Television Fixed Service and the Private Operational Fixed Microwave Service (OFS)*, 45 Fed. Reg. 29,350 (May 2, 1980).

[25/] *See Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service,* (continued...)

most wireless cable systems are being designed to operate with a transmitter output power in excess of the 10 watt level that was standard when the current 15-mile PSA was formulated. Thus, an adequate signal is being provided by wireless cable operators to subscribers located well beyond the current PSA boundaries.[26/] As a result, the many stations that transmit a quality signal farther than the "typical" station are denied protection of service to subscribers.

WCAI has proposed in its pending Petition for Partial Reconsideration in General Docket No. 90-54 an approach that more closely tailors the PSA boundary to the service capabilities of each station, without introducing undue complexity. Simply stated, WCAI proposes that the PSA boundary for each station that transmits omnidirectionally be set at a fixed mileage (subject to the particular radio horizon of the station), with the length of the radius dependent upon the EIRP at which the station radiates. For those stations transmitting non-omnidirectionally, WCAI would set the boundary along each radial depending upon the

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[25/](...continued)
Instructional Television Fixed Service, and Cable Television Relay Service, 5 FCC Rcd 6410, 6418-19 (1990), on recon. 6 FCC Rcd 6764 (1991)[hereinafter cited as "*Gen. Docket No. 90-54 R&O*"].

[26/]Indeed, no station could ever possibly meet precisely the parameters utilized since the Commission made no allowance at all for the inevitable line and connector losses between the output of the transmitter and the input of the transmission antenna. Thus, while the Commission assumes that stations operating at 10 watts TPO and a 13 dB gain antenna would transmit with an EIRP of 23 dBW, most stations utilizing that equipment actually transmit with an EIRP of 19-21 dBW as a result of the unavoidable line and connector losses.

EIRP transmitted along that radial. The specific radius for each level of EIRP is set forth in the following table, which WCAI proposed be incorporated into Section 21.902:

EIRP Along Radial (dBW)	Distance to Boundary (Miles from Station)	EIRP Along Radial (dBW)	Distance to Boundary (Miles from Station)
0	7.2	20	18.0
1	7.5	21	19.0
2	7.9	22	20.0
3	8.3	23	21.0
4	8.7	24	22.0
5	9.1	25	23.0
6	9.5	26	24.0
7	10.0	27	25.0
8	10.5	28	26.0
9	11.0	28	27.0
10	11.5	30	28.5
11	12.0	31	29.5
12	12.5	32	31.0
13	13.0	33	32.5
14	13.5	34	34.0
15	14.5	35	35.5
16	15.0	36	37.5
17	15.5	37	39.5
18	16.5	38	41.5
19	17.0	39	44.0

These specific radii were derived in the same fashion that the Commission first derived the 15-mile PSA boundary in the *Notice of Inquiry and Proposed Rulemaking* in General Docket No. 80-113 -- WCAI calculated the distance at which a station transmitting at the given EIRP would yield the benchmark faded S/N ratio, but assumed the use of today's superior reception technology.

In its Petition for Partial Reconsideration, WCAI provided the Commission with an extensive discussion of the public interest benefits to be derived from adoption of its proposed

PSA definition. In the interest of brevity, WCAI will refrain from repeating that entire discussion here. However, the Commission should note two significant benefits that relate directly to the subject matter of this proceeding -- the expediting of ITFS application processing.

First, enlarging the PSA so that it adequately protects a wireless cable system's subscribers will frustrate those inclined to file strike applications. Obviously, if the PSA provides adequate protection, it will be impossible for a greenmailer to propose a closely-spaced station that, while meeting the FCC's interference protection benchmarks, could cause actual electrical interference at subscribers' residences. The net result of frustrating greenmail applications will be to reduce the number of ITFS applications, thus freeing staff resources to process *bona fide* ITFS applications more rapidly.

Second, WCAI's approach will simplify ITFS application processing. The EIRP at which each station transmits along a given azimuth is easily determined from the application for that station, and, once determined, the table proposed by WCAI identifies precisely the PSA boundary. In particular, WCAI's proposal will greatly simplify the process of determining the PSA for stations utilizing non-omnidirectional transmission antennas. Under the formula set out currently in Section 21.902(d)(2) of the Rules, it is extremely difficult to calculate with precision the PSAs for stations that do not transmit with the same EIRP in every direction. Reasonable engineers have frequently disagreed over the determination of PSA boundaries for non-omnidirectional systems, resulting in unnecessary disputes. WCAI's approach, however, specifies a precise radius for each azimuth based on the EIRP level along

that azimuth. Since it is not difficult to calculate the EIRP of a non-omnidirectional antenna along any given azimuth -- indeed, the Commission recently requested that each ITFS licensee submit such information -- the task of calculating the PSA for stations that transmit with non-omnidirectional antennas will be greatly simplified under WCAI's proposal.

The Commission should also note that WCAI has proposed clear, concise policies to address the transition to new PSA rules.[27/] Specifically, WCAI has proposed that in order to simplify the transition and avoid the need for amendments to existing applications filed in reliance on the current rules, the Commission should only require that applications for new stations or major modifications filed after the effective date of the new rules comply with the new PSA rules. Thus, while all stations will enjoy the benefit of a new PSA definition with respect to applications submitted after the effective date of new rules, no applicant under the current rules will be disadvantaged. For example, if Applicant A has on file on the effective date of the new rules a proposal that causes no interference to Station B under the existing rules, but would interfere with the PSA afforded Station B under WCAI's proposal, Applicant A's application should still be grantable. However, if Applicant C files after the new rules become applicable, it should have to protect the new PSAs for Applicant A and Station B.

Finally, in recognition of the fact that many of the ITFS licensees that will be grandfathered under new PSA rules in the future will need to amend their applications or modify their licenses, WCAI has suggested that the Commission provide that where a station must accept harmful interference from another station because of PSA grandfathering, in any

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[27/]WCAI Petition for Reconsideration, at 5 n. 10.

subsequent analysis of the potential for interference from the interfering station to the interfered-with station submitted with an amendment to the application for the interfering station or with an application for a modification of the license for the interfering station, the PSA for the interfered-with station shall be reduced in size by eliminating any area(s) in which interference from the most recently authorized design of the interfering station is predicted. This revision is consistent not only with the Commission's previous commitment to permit interference-reducing reconfigurations,[28/] but also with the Commission's approach to an analogous problem when it first established a PSA for single channel MDS stations.[29/]

In short, adoption of WCAI's proposed revisions to the Commission's PSA definition will significantly benefit the Commission (by reducing the number of greenmail applications being submitted), the legitimate wireless cable operator (by closely tailoring the wireless cable operator's PSA to the area it can actually serve), and the ITFS community (by enhancing the viability of the wireless cable industry that is responsible for funding virtually all of the new ITFS stations being proposed). Indeed, absent adoption of WCAI's proposed revisions to the PSA definition, the Commission may soon find its ITFS application process as backlogged as it was when the freeze was imposed.

[28/] *See Gen. Docket No. 90-54 R&O,* 5 FCC Rcd at 6412-13.

[29/] *80-113 FR&O,* 98 F.C.C.2d at 111.

C. The Commission Should Not Restrict PSA Applicability In A Manner That Promotes Speculation And Greenmail.

In the *FNPRM*, the Commission expresses a concern that requests for a PSA are being made solely to obstruct the grant of pending applications.[30/] Certainly, WCAI is appalled that strike applications for addition of a PSA are being filed, and supports the Commission's efforts to end that practice. The Commission should take care, however, that its efforts to prevent strike PSA applications not unwittingly dilute the interference protection afforded to legitimate wireless cable operators and their ITFS affiliates.

While WCAI shares the Commission's abhorrence of strike PSA requests, the Commission must recognize that, by their nature, requests for PSA protection are designed to preclude nearby facilities. While the *FNPRM* suggests that PSA requests are "designed to prevent or dilute competition," a legitimate wireless cable operator is motivated to request a PSA to protect from harmful interference the critical mass of subscribers necessary to attract financing, to assure that its subscribers are able to enjoy interference-free signals, and to protect its unrecoverable investment in reception equipment located at subscribers' premises. The Commission must recognize that the same tool -- a request for a PSA -- can be used for good and evil. The Commission should not preclude the benefits of a PSA simply because the tool has been misused by some.

While the Commission has proposed that generally a PSA would only be effective with respect to applications filed after the PSA request, it has specifically proposed that where

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[30/] *See FNPRM*, at ¶¶ 26-27.